



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/756,764

01/14/2004

Per Egnclov

030481-0213

1513

22428

7590

11/30/2006

FOLEY AND LARDNER LLP  
SUITE 500  
3000 K STREET NW  
WASHINGTON, DC 20007

EXAMINER

KOTINI, PAVITRA

ART UNIT

PAPER NUMBER

3731

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/756,764

Applicant(s)

EGNELOV ET AL.

Examiner

Pavitra Kotini

Art Unit

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10-18 is/are rejected.
- 7) ☒ Claim(s) 6-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/25/04, 6/18/04</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-5, 11-18** are rejected under 35 U.S.C. 102(b) as being anticipated by Kensey et al (US-5545178).

Kensey et al discloses:

Regarding **claim 1**, an insertion tool (fig.1, 32) having an actuator (fig.1, 74) which is operable in a first mode (fig.1) in which the actuator is configured for deployment of an inner seal (fig.1, 38) inside the vessel and operable in a second mode (fig.3, withdrawing plunger 74) in which the actuator is configured for tamping a locking member (fig.1, 36) on an outside of the vessel (fig.3-5), wherein the actuator is arranged to be set into said second mode (fig.3) in response to a pulling force (col.11, lines 5-22) acting on a filament (fig.1, 42) connecting the inner seal and the locking member.

Regarding **claim 2**, a housing (fig.1, 34) arranged to be positioned by its distal end for guidance of a seal assembly, the seal assembly comprising: said inner seal (fig.1, 38), attached to a distal end of said filament (fig.1, 42); said locking member (fig.1, 36), movably carried on the filament and spaced from the inner seal (fig.1,2); a pusher (fig.2, 40), guided in the housing, a distal end of the pusher detachably connected to the inner seal (fig.2); and a tamping tube (fig.2, 32), guided in the housing,

the filament running through the tamping tube and carrying the locking member and the inner seal outside a distal end of the tamping tube (fig.2), wherein the closure device further comprises: an actuator mechanism controlling the actuator in said first mode to drive the pusher for deployment of the inner seal (col.10, line 57- col.11, line 4), whereupon the actuator mechanism is adapted to disable the actuator until a pulling force acting on the filament causes the actuator to be reset into said second mode to drive the tamping tube for tamping the locking member (col.11, lines 5-22).

Regarding **claim 3**, a sleeve (fig.1, 88); a slider (fig.1, 84); and said seal assembly, wherein the sleeve is telescopically received in the housing (fig.1), the actuator (fig.1, 68) is telescopically received in the sleeve (fig.1), the seal assembly is operatively connected to the slider (fig.1, 84 is connected to 38 via filament 42) and the slider is engaged by the actuator in a first relative position to be moved by the actuator for deployment of the inner seal (fig.1; col.10, line 67), and displaceable relative to the actuator into a second relative position (fig.2, and fig. 3-5) wherein the slider is engaged by the actuator to be moved thereby for tamping the locking member (col.11, lines 15-17).

Regarding **claim 4**, the slider is displaced from the first relative position to the second relative position in response to a pulling force being applied to the closure device and acting through the filament which is arrested by its distal end being attached to the inner seal and by its proximal end being connected to the slider (figs.1-5 depict the initially position of slider 84 and the movement of 40 due to pulling on filament 42).

Regarding **claim 5**, wherein the actuator (fig.1, 74) is temporarily arrested in the sleeve (once the button 76 is compressed, the plunger 74 is pushed downward through sleeve 88 to the position the anchor and sealing member at desired location, completing the first mode, at which point there is no movement in the sleeve) and disabled in the second mode of operation (the second mode is initiated when 74 is withdraw, thereby disabling the actuator), to be released by action of the slider as the slider is displaced from said first to said second relative position (slider 84 is displaced from first position (fig.1) to second position (fig.3) and as a result disengages and causes the actuator to be removed).

Regarding **claim 11**, the housing (fig.1, 34), the forward portion (distal portion), and the insertion tube (fig.1, 64) are integrally formed (fig.1).

Regarding **claim 12**, a housing (fig.1, 34); a sleeve (fig.1, 88); said actuator (fig.1, 74); a slider (fig.1, 84); and a seal assembly, wherein the sleeve is telescopically received in the housing, the actuator is telescopically received in the sleeve (sleeve and actuator are telescopically arranged because they are slidable within the housing), the seal assembly is operatively connected to the slider (anchor 38 and sealing member 36 are connected to slider 84), and the slider is engaged by the actuator in a first relative position (fig.1) to be moved by the actuator for deployment of the inner seal (slider 84 is moved downward by actuator 74 to deploy seal), and displaceable relative to the actuator into a second relative position (fig.3) wherein the slider is engaged by the actuator to be moved thereby for tamping the locking member (the slider 84 is displaced further down by actuator 74 into a second position for tamping).

Regarding **claim 13**, an actuator mechanism configured to control the actuator in said first mode for deploying the inner seal and configured to disable the actuator after deploying the inner seal (col.10, line 57- col.11, line 4) until a pulling force acting on the filament causes the actuator to be reset into said second mode for tamping the locking member (col.11, lines 5-22).

Regarding **claim 14**, with respect to claim 1 above, the elements are defined as follows: an insertion tool (fig.1, 32) having an actuator (fig.1, 74) which is operable in a first mode (fig.1) in which the actuator is configured for deployment of an inner seal (fig.1, 38) inside the vessel and operable in a second mode (fig.3, withdrawing 74) in which the actuator is configured for tamping a locking member (fig.1, 36) on an outside of the vessel (fig.3-5), wherein the actuator is arranged to be set into said second mode (fig.3) in response to a pulling force (col.11, lines 5-22) acting on a filament (fig.1, 42) connecting the inner seal and the locking member, a pusher (fig.1, 84), guided in the housing (fig.1, 34), a distal end of the pusher detachably connected to the inner seal (fig.1), wherein in said first mode, said pusher is engaged with said actuator (84 is engaged with 74), and wherein in said second mode, said pusher is disengaged from said actuator (fig.3, pusher 84 is disengaged from actuator 74).

Regarding **claim 15**, said first and second modes are non-overlapping (figures 1 & 3 respectively).

Regarding **claim 16**, the closure device is configured for one-hand operation from said first mode to said second mode (the device of Kensey can be operated with

Art Unit: 3731

simply one hand by pushing on the button 76 in order to actuate the device from the first mode (fig.1) to the second mode (fig.3) of delivering the anchor and sealing member).

Regarding **claim 17**, an insertion tool having an actuator which is operable in a first mode in which the actuator is configured for deployment of an inner seal inside the vessel (fig.1, 2) and operable in a second mode in which the actuator is configured for tamping a locking member on an outside of the vessel (fig.3-5), wherein the actuator is arranged to be set into said second mode in response to a pulling force acting on a filament connecting the inner seal and the locking member (col.11, lines 5-22); operating said insertion tool in said first mode (fig.2); pulling said filament so as to set said actuator in said second mode (col.11, lines 5-22); and operating said insertion tool in said second mode (fig. 3-5).

Regarding **claim 18**, the step of operating the insertion tool in said first mode disables operation of the insertion tool in said second mode (Kensey ('178) discloses that the second mode (fig.3) is only achieved *only after* the completion of the first mode (fig.1)).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kensey et al (US-5545178) in view of Kensey et al (US-20010003158).

Kensey ('178) discloses the invention substantially as claimed above and furthermore a housing (fig.1, 34), the distal end of which is associated with an insertion tube (fig.1, 64), and a forward portion connected thereto, and said seal assembly comprises said inner seal and said locking member.

Kensey ('178) does not disclose said forward portion of the housing to have separate passageways for a seal assembly and for a guiding member, respectively, said passageways converging.

However, Kensey ('158) teaches a tube (fig.31, 28') to have separate passageways (fig.32), which converge at the distal end. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate separate passageways as taught by Kensey ('158) in the forward portion of the housing, which eventually converge within the insertion tube as disclosed by Kensey ('178). Such a modification would provide the advantage of separate lumens so that various filaments/members do not become entangled or knotted.

#### ***Allowable Subject Matter***

**Claims 6-9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nash et al (US-5662681) discloses the claimed limitations for a closure device for sealing a puncture; Mueller et al (US-RE34021), Stack (US-5342393), Kensey et al (US-RE34866), Bonutti (US-6045551), Akerfeldt et al (US-6425911) all disclose variations of a closure device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pavitra Kotini whose telephone number is 571-272-0624. The examiner can normally be reached on M-F 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan Nguyen can be reached on 571-272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pavitra Kotini  
AU 3731

  
ANH TUAN T. NGUYEN  
SUPERVISORY PATENT EXAMINER  
11/25/02.